

## INTERNATIONAL SEARCH REPORT

IB2004/003196

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F42D1/08

According to International Patent Classification (IPC) or to both national classification and IPC

## B. HELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F42D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, COMPENDEX

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 12 78 908 B (RHEINISCHE KALKSTEINWERKE) 26 September 1968 (1968-09-26) column 2, lines 19-30 column 3, lines 1-24 figure 1	1-23
Y	WO 02/42711 A (COLLINSWORTH STEPHEN MITCHELL ; HEINKE NILS ALBERTO (US); INTERNAT TEC) 30 May 2002 (2002-05-30) page 9, line 25 - page 10, line 16; figures 3,4	1-23
Y	US 5 497 829 A (RAJKOVICH RICHARD A) 12 March 1996 (1996-03-12) column 1, lines 21-31 column 3, lines 13-25 figure 3	5,7,8, 18,20,21

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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

13 January 2005

Date of mailing of the international search report

21/01/2005

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 035 286 A (FITZGIBBON JR DANIEL F)  30 July 1991 (1991-07-30)  column 11, line 61 - column 12, line 28  column 13, lines 43-48  figures 10,14c</p>	

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

Continuation of Box II.2

Claims Nos.: 24-27

Claims 24-27 are unclear (Article 6 PCT) because they rely on references to the drawings and the description (see Rule 6.2(a) PCT).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB2004/003196

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: 24-27  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 1278908	B	26-09-1968	NONE	
WO 0242711	A	30-05-2002	AU 1420002 A CA 2429447 A1 CN 1474930 T EP 1336074 A1 WO 0242711 A1 US 2004099445 A1	03-06-2002 30-05-2002 11-02-2004 20-08-2003 30-05-2002 27-05-2004
US 5497829	A	12-03-1996	AU 6023394 A CA 2110638 A1 EP 0774107 A1 WO 9514208 A1 US 5803172 A ZA 9401051 A	06-06-1995 29-07-1994 21-05-1997 26-05-1995 08-09-1998 16-08-1995
US 5035286	A	30-07-1991	US 4919203 A CA 1302236 C US 4913233 A	24-04-1990 02-06-1992 03-04-1990